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ABSTRACT

The purpose of this working paper is to understand the extent to which competing methodologies for measuring degree completion affect the comparability of information presented, and to better position the Indiana State Commission for Higher Education to make comparisons with national data. This working paper compares seven national studies of degree completion, as measured by student cohort, second-year persistence, transfer rates, and measurement period, including an attempt to adjust the most recent Commission figures for "best comparability" with each. Of the six national studies with published degree completion rates, Indiana appears to outperform five of them, comparing Indiana to the nation as a whole. Nine suggestions are offered for modifying the way in which the Commission measures and/or reports degree completion and persistence in the next analysis cycle. The intent of these suggestions is to allow the next Commission's report on degree completion and persistence to be compared with national data. Following this discussion, Commission staff will prepare the next analysis with two primary objectives: (1) produce degree completion and persistence rate information which can be compared nationally and with as few explanatory caveats and possible, and (2) produce a reporting mechanism which can be reasonably replicated for trend analyses on Indiana public postsecondary education. Contains 19 references. (JJL)

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Indiana Degree Completion in National Context: Working Paper

Indiana State Commission for Higher Education
Thursday, May 8, 1997

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INDIANA DEGREE COMPLETION IN NATIONAL CONTEXT:

WORKING PAPER*

April 30, 1997

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COMMISSION FOR HIGHER EDUCATION
Thursday, May 8, 1997

DISCUSSION ITEM B: **Indiana Degree Completion in National Context: Working Paper**

Staff Recommendation For discussion only.

Background

In 1987, the Indiana General Assembly amended IC 20-12-0.5-8 to require the Commission for Higher Education to "develop a definition for and report biennially on" degree completion and persistence rates in Indiana postsecondary education. Including the initial report in 1989, four reports on degree completion have been conducted and reported to the Commission.

The purpose of this working paper is to examine the comparability of past reports with each other and with national measurement methods. Following this discussion, Commission staff will prepare the next analysis with two primary objectives:

1. produce degree completion and persistence rate information which can be compared nationally and with as few explanatory caveats as possible; and,

2. produce a reporting mechanism which can be reasonably replicated for trend analyses on Indiana public postsecondary education.

Supporting Documents

Indiana Degree Completion in National Context: Working Paper, April 30, 1997.

Degree Completion and Persistence in Indiana Public Postsecondary Education: 1996 Working Paper (March 1996). (available from the Commission office)

Indiana Commission for Higher Education

Indiana Degree Completion in National Context: Working Paper

April 30, 1997

EXECUTIVE SUMMARY

- The Commission has reported on degree completion and persistence rates at Indiana public postsecondary institutions for entering freshmen from 1984, 1986, 1989 and 1992.

- Recent questions on how Indiana campuses perform relative to other campuses across the nation have been difficult to answer because of key differences in the way in which degree completion and persistence have been measured:

    1. *Student cohort definition*. Who is tracked? All students? Full-time students? Only students beginning with a minimum number of credit hours?

    2. *Second-year persistence (return enrollment) measure*. While some studies view second-year persistence only on students enrolling in the next fall semester, others, including the Commission, count students enrolling anytime in the second year.

    3. *Transfer students*. The Commission has a unique capability to track student enrollment across Indiana public campuses. The effect of this is that many students who transfer continue to be counted. This differs from campus-based reports in which transfer students are only known to have left that campus.

    4. *Measurement period*. While it has become normative practice to measure degree completion rates at 150% of the time it should take a normally-enrolled full-time student to graduate (six years for baccalaureate, three years for associate), there is still variability in reporting. At particular issue is the tracking of part-time students, who are likely to take more than the 150% timeframe.

- This working paper compares seven national studies of degree completion, including an attempt to adjust the most recent Commission figures for "best comparability" with each. Of the six national studies with published degree completion rates, Indiana appears to out-perform five of them, comparing Indiana to the nation as a whole. There are still, however, some methodological differences that can only be overcome through a re-design of the Commission analysis.

- The national studies compared are: American Association of State Colleges and Universities (AASCU), the American College Testing Program (ACT), the Consortium for Student Retention Data Exchange (CSRDE), the Higher Education Research Institute (HERI), the National Collegiate Athletic Conference (NCAA), and two from the National Center for Education Statistics (NCES) -- Beginning Postsecondary Students (BPS) 5 Years Later, and the IPEDS (Integrated Postsecondary Education Data System) Graduation Rate Survey (GRS).

- Nine suggestions are offered for modifying the way in which the Commission measures and/or reports degree completion and persistence in the next analysis cycle. The intent of these suggestions is that the next Commission results on degree completion and persistence can be compared with national data.

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Indiana Degree Completion in National Context: Working Paper

In 1987, the Indiana General Assembly amended IC 20-12-0.5-8 to require the Commission for Higher Education to "develop a definition for and report biennially on" degree completion and persistence rates in Indiana postsecondary education. In March, 1989, the Commission discussed its first report on degree completion and persistence. This first report focused on the cohort of students who began as freshmen in the 1984-85 school year and tracked them for four years. An update on this cohort of students, tracking six years of activity, was delivered in June, 1991. Since the 1984-85 cohort, the degree completion and persistence rates of three additional cohorts have been reported -- 1986-87 entering freshmen, fall 1989 entering freshmen (baccalaureate students only), and fall 1992 entering freshmen (associate students only).

The purpose of this working paper is to understand the extent to which competing methodologies for measuring degree completion affect the comparability of information presented, and to better position the Commission's analyses to make comparisons with national data. Following this discussion, Commission staff will prepare the next analysis with two primary objectives: (1) produce degree completion and persistence rate information which can be compared nationally and with as few explanatory caveats as possible; and (2) produce a reporting mechanism which can be reasonably replicated for trend analyses on Indiana public postsecondary education.

National Studies Of Degree Completion Rates

In an examination of national studies of degree completion and persistence, there are a variety of measurement and reporting methods. The only real constant across the studies reviewed for this report is that the students tracked begin their postsecondary studies in the fall term -- after that, the methods and definitions become dispersed. While student tracking from year to year is more frequently term-specific, certain studies follow students' annual enrollment activity. The number of years tracked for student degree completion, in the case of baccalaureate degree seeking students, can vary from four to nine years. And finally, while some studies differentiate students' enrollment status (full-time or part-time at entry), others report on all students.

The data presented in Figure 1 and Figure 2 illustrate the varied nature of reporting methods for degree completion rates on the national level. For comparison and context, the degree completion rates from the most recent Commission analysis are displayed at the bottom of the table.

Compared to studies of degree completion rates at the baccalaureate level, there are fewer to provide a comparison for other degree levels -- in particular, at the associate level. The studies referenced in Figure 2 stem from the same list presented in Figure 1, but only for those studies which provide information on associate degree completion rates.

Figure 1a:
Baccalaureate Degree Completion Rates as Reported by Selected National Studies: All Students

		Cohort Information							Study History	
	Study	Cohort[1]	Attendance status of students	Campuses surveyed for report	Method of data collection	Completion years reported	Reported completion rates		Distinctive characteristics	First cohort & frequency
1.	Higher Education Research Institute	1985	all students, full-time and part-time	365 campuses from CIRP[2] membership	individual student data on 75,000 students	4 years 6 years 9 years	6-year rates Public Universities Public Colleges Public Campus Avg.	 40% 37% 39%	Follows degree completion to 9 years	Annual CIRP data since 1966
2.	National Center for Education Statistics: Beginning Postsecondary Students	1989	all students, full-time and part-time	1,008 campuses, including 203 public 4-year campuses	individual student data (about 7,000 students)	5 years	Public campuses	48%	Shows student transfer activity (campus and level)	Stand-alone study of 1989 entering freshmen. Will be replicated on 1992 freshmen.
3.	Indiana Commission for Higher Education	1989	all baccalaureate degree seeking freshmen taking at least 12 credits in first year.	All Indiana Public campuses	individual student data from the Commission's SIS data files. (24,950 1989 baccalaureate freshmen)	2 years 3 years 4 years 5 years 6 years	All Campus Avg. (5-years) All Campus Avg. (6-years)	43% 51%	With statewide database, students who complete at ANY public Indiana campus are found as "completers."	Biennial report including freshman cohorts from 1984-85, 1986-97 and fall 1989

[1] Most recent cohort available. All studies begin with a cohort of fall term, first-time, degree-seekers.

[2] CIRP is the Cooperative Institutional Research Program, established in 1966 by the American Council on Education. CIRP is now administered by the Higher Education Research Institute at the University of California at Los Angeles (UCLA).

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Figure 1b:
Baccalaureate Degree Completion Rates as Reported by Selected National Studies: Full-Time Students

		Cohort Information							Study History	
	Study	Cohort[3]	Attendance status of students	Campuses surveyed for report	Method of data collection	Completion years reported	Reported completion rates		Distinctive characteristics	First cohort & frequency
1.	American Association of State Colleges and Universities	1988	full-time, baccalaureate degree seeking	194 AASCU member campuses	campus survey	6 years	Small campuses Medium campuses Large campuses Rural Metropolitan Urban Overall	44% 44% 42% 45% 42% 40% 43%	Includes data on transfer students as well as those "native" to the campus	Annual survey since 1992 (1985 freshman cohort)
2.	American College Testing Program[4]	1989	full-time, baccalaureate degree seeking	448 public baccalaureate degree granting campuses	institutional survey (included self-reported admissions selectivity)	5 years	Public, highly sel. Public, selective Public, traditional Public, liberal Public, open Public Campus Avg.	72% 51% 43% 34% 33% 45%	Data by campus selectivity. Large number of institutional respondents	Annual Survey since 1983
3.	Consortium for Student Retention Data Exchange	1987 - 1989	full-time, baccalaureate degree seeking	164 campuses, including 125 public campuses	survey of campuses	4 years 5 years 6 years	6-year public rates Highly selective Selective Less selective All campuses	 65% 54% 39% 55%	estimate of "eventual" completion (60% for all students/ campuses)	Established in 1994, the first cohort reported is fall 1987 freshmen
4.	National Center for Education Statistics: Graduation Rate Survey[5]	1991	Full-time students	ALL institutions (approximately 3,000)	institutional survey	4 years 5 years 6 years	not yet available		Includes all US campuses	Annual survey. Piloted in 1996 with expected implementation beginning 1997.
5.	National Collegiate Athletic Association	1989	full-time baccalaureate degree seeking	202 public campuses (large= more than 10,500 students)	institutional survey	6 years	Large Public schools Small Public schools All Public Schools	58% 42% 53%	Includes detail on student athletes and all students	Annual survey since 1992 (1986 cohort)
6.	Indiana Commission for Higher Education	1989	all baccalaureate degree seeking freshmen taking at least 12	All Indiana Public campuses	20,841 students' data from CHE SIS data files.	2 years through 6 years	All Campus Avg. (5-years) All Campus Avg. (6-years)	51% 59%	"Completers" may complete at ANY public Indiana campus	Biennial report including cohorts from 1984-85, 1986-97 and 1989

[3] Most recent cohort available. All studies begin with a cohort of fall term, first-time, degree-seekers.

[4] Completion rates reported for the ACT study have been aggregated from those published by ACT. While ACT publishes completion rates by campus type (defined by highest degree offered), the weighted average across campus type is provided in this table.

[5] Administered as part of the Integrated Postsecondary Education Data System (IPEDS).

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Figure 2a:
Associate Degree Completion Rates as Reported by Selected National Studies: All Students

		Cohort Information							Study History	
	Study	Cohort[6]	Attendance status of students	Campuses surveyed for report	Method of data collection	Completion years reported	Reported completion rates		Distinctive characteristics	First cohort & frequency
1.	National Center for Education Statistics: Beginning Postsecondary Students	1989	all students, associate degree seeking at a 2-yr public campus	1,008 campuses, including 203 public 4-year campuses	individual student data (about 7,000 students)	5 years	Public campus	21%	Shows student transfer activity (campus and level)	Stand-alone study of 1989 entering freshmen. Will be replicated on 1992 freshmen.
2.	Indiana Commission for Higher Education	1992	all associate degree seeking freshmen taking at least 12 credits in first year.	All Indiana Public campuses (not just 2-year schools)	3,437 students' data from CHE SIS data files.	2 years 3 years	All Campus Avg. (3-years)	23%	With statewide database, students who complete at ANY public Indiana campus are found as "completers."	Biennial report since 1989 (1985 freshmen)

[6] Most recent cohort available. All studies begin with a cohort of fall term, first-time, degree-seekers.

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Figure 2b:
Associate Degree Completion Rates as Reported by Selected National Studies: Full-Time Students

		Cohort Information							Study History	
	Study	Cohort[7]	Attendance status of students	Campuses surveyed for report	Method of data collection	Completion years reported	Reported completion rates		Distinctive characteristics	First cohort & frequency
1.	American College Testing Program	1992	full-time, associate degree seeking	994 campuses, including 822 public campuses offering an associate degree as the highest level	campus survey	3 years	Public, Selective (1) Public, traditional (22) Public, liberal (48) Public, open (751) Public Campus Avg. (number of campuses)	na 39% 48% 35% 36%	Data by campus selectivity. Large number of institutional respondents	Annual Survey since 1983
2.	National Center for Education Statistics: Graduation Rate Survey[8]	1991	Full-time students	ALL institutions (approximately 3,000)	institutional survey	4 years 5 years 6 years	not yet available		Includes all US campuses	Annual survey. Piloted in 1996 with expected implementation beginning 1997.
3.	Indiana Commission for Higher Education	1992	all associate degree seeking freshmen taking at least 12 credits in first year.	All Indiana Public institutions (not just 2-year schools)	2,271 students' data from CHE SIS data files.	2 years 3 years	All Campus Avg. (3-years)	29%	With statewide database, students who complete at ANY public Indiana campus are found as "completers."	Biennial report since 1989 (1985 freshmen)

[7] Most recent cohort available. All studies begin with a cohort of fall term, first-time, degree-seekers.

[8] Administered as part of the Integrated Postsecondary Education Data System (IPEDS).

Extent Of Comparability With National Studies

The inevitable question each time the Commission analyses have been presented is, "How do we compare nationally?" Unfortunately, due to the uniqueness of the Commission's study methodology, a good answer is not readily available. One of the distinctive strengths of the Commission's degree completion and persistence analysis stems from the statewide nature of the database -- students can be tracked throughout the system of Indiana public higher education for a more robust measure, spanning campus and institutional transfer. Unfortunately, this is also a factor influencing non-comparability with national data. Along with the basic need to report numbers for degree completion and persistence that can be compared nationally, activity at the Federal level is inspiring consistent definitions of cohorts and measurement periods.[9]

What can be said, using the Commission's 1996 analysis of degree completion and persistence about how Indiana compares with the rest of the nation?

AASCU The American Associate of State Colleges and Universities (AASCU) data and findings are similar to those reported by HERI. For responding institutions, baccalaureate freshmen are tracked for degree completion after 6 years. The slight variance in the reported six-year degree completion rate (38.9% reported by HERI compared to 40.6% reported by AASCU) can be explained by differences in the freshman cohort (1985 for HERI versus 1989 for ACT), and in the mix of institutional respondents to the surveys. Again, in the Commission's 1996 study, the all-campus six-year degree completion rate was reported as 50.5%, with preliminary analyses without the 12-credit filter indicating that this rate would be closer to 47%.

ACT The American College Testing Program (ACT) report, like that of the NCAA, shows degree completion rates for students who begin as full-time freshmen in the fall term of 1989. As such, the same comparative caveats hold true: (1) the Commission's analysis defines full-time based on annual enrollment rather than fall, and (2) the Commission analysis tracks degree completion at <u>any</u> Indiana public institution. The other difference between the Commission and ACT analyses is the length of time that the students are tracked. ACT reports a five-year degree completion rate, rather than the six-year rate reported by the Commission. The Commission report, however, does contain the five-year rate, found in the technical detail. Therefore, while the ACT report shows a five-year degree completion rate for 1989 full-time freshmen at public institutions as 46.1%, a reasonably comparable figure for Indiana public institutions is 50.6%.

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[9] Federal "Student Right-to-Know" regulations, and a newly implemented Completion Rates Survey within the context of the Integrated Postsecondary Education Data System (IPEDS) of the National Center for Education Statistics.

With regard to associate degree seeking students, the Commission's analysis of the full-time students is a good comparison with the figures presented by ACT. ACT indicates an overall degree completion rate at two-year schools of 36%, while the Commission's comparable figure (for two-year schools only) is 32%. Both include full-time, associate degree seeking tracked for three years. Differences in the Commission study include the same issue of the use of a statewide database rather than institution specific, as well as the ability to report on associate degree completion for four-year campuses.

CSRDE The Consortium for Student Retention Data Exchange (CSRDE) was established in 1994 at the University of Oklahoma and includes 218 member institutions. While the CSRDE only reports degree completion rates for students who enroll full-time in the fall semester of their freshman year, campuses can be isolated by type or selectivity. Degree completion rates are aggregated across three student cohorts to control for "spikes" in student performance, and are reported for degree completion after six years. While the CSRDE computes an average six-year degree completion rate for all campuses of 55%, they have also computed an estimated eventual graduation rate of 60%. (This eventual graduation rate is based on 5% of students persisting into the seventh year, and assumes that persistence into the seventh year indicates that the student is more likely to graduate than to drop out. The CSRDE reports a total six-year graduation rate of 55% for full-time freshmen at public campuses. A comparable figure of 59% is available from the Commission analysis by looking at the sub-cohort of full-time students.

HERI The Higher Education Research Institute (HERI, located at the University of California at Los Angeles) analysis, like the Commission's, reports degree completion by entering freshmen after six years (as well as nine). There is no reported distinction for enrollment status (full-time versus part-time). Because of the "12-credit filter" in the Commission's 1996 analysis (students attempting fewer than 12 credits in the first year were excluded from the analysis), there is not a good basis for comparison. The six-year degree completion rate reported by HERI, for all reporting public campuses, is 38.9%. In the Commission's 1996 study, the all-campus six-year degree completion rate was reported as 50.5%. Preliminary analyses without the 12-credit filter indicated that this rate would be closer to 47%.

NCAA The National Collegiate Athletic Association (NCAA) report provides data on students who begin their studies full-time in Fall 1989, and then follows them for six years to report degree completion. The Commission analysis also contains data on the full-time enrolled students, however, the Commission full-time definition is annual (24

credits in the first year) rather than term specific (12 credits in the fall term)., In addition, the Commission's analysis tracks completion to any Indiana public institution, not just the originating campus. With these caveats in mind, we can say that the NCAA national average for six-year degree completion by 1989 full time baccalaureate freshmen at public institutions is 53%. A reasonably comparable figure reported in the Commission's 1996 analysis is 59%.

NCES-BPS

The Beginning Postsecondary Students (BPS) study uses a dataset from the National Postsecondary Student Aid Study (NPSAS). Because the National Center of Education Statistics Beginning Postsecondary Students (NCES-BPS) Study is a student-specific survey, rather than institution-specific, degree completion is known even if the student has transferred to another institution, like the Commission's. The principle differences between this NCES study and that of the Commission are: (1) NCES only tracks degree completion to five years, rather than six, and (2) the "12-credit filter" used by the Commission. The NCES-BPS study reports a five-year degree completion rate of 47.7% for students who begin as baccalaureate freshmen at a public campus. While the Commission's 1996 analysis shows a six-year completion rate of 50.5% (and five-year completion rate of 43%), eliminating the 12-credit filter shows a six-year degree completion rate of 47% and a five-year degree completion rate of 40%). It can be noted that, with attempts to adjust for comparability, this is the only study in which the Commission's analysis indicates a lower degree completion rate for Indiana than that of the study being contrasted. Because the NCES-BPS study relies on student responses, there may be some respondent bias -- students who complete their degree more likely to remain in the study than those who do not.

While associate degree seeking students (who begin at a two-year college) have a reported degree completion rate of 21% in the NCES-BPS analysis, the adjustment necessary for comparability with the Commission analysis is to view only Indiana's two-year campuses, and without the 12-credit filter. The resulting Commission figure is 21% (compared to 25% reported with the 12-credit filter).

NCES-GRS

The Graduation Rate Survey (GRS) is administered by the U.S. Department of Education's National Center of Education Statistics (NCES) as a component of the Integrated Postsecondary Education Data System (IPEDS), and is scheduled to begin full implementation in 1997 using the fall 1991 student cohort. While the NCES-GRS has not yet been implemented, it seems to hold the most promise for national comparisons for several reasons. First, the campuses reported will include the universe of postsecondary institutions. Second, because of its universal implementation, there will be no

substantial issues of comparability when contrasting institutions, states, or sectors. Third, the NCES-GRS is designed to respond to questions related to student transfers as well as student athletes.

The NCES-GRS, however, will not replace the other surveys. It does not respond to all of the questions posed. For example, the NCES-GRS will only provide information on first-time full-time students. Neither will the NCES-GRS provide a direct response to questions based on institutional selectivity.

Despite methodological consistency across reports issued by the Commission for Higher Education, comparability of the resulting data with nationally reported sources has not been a capability within the general presentation of data. What is often relegated to the fine print and technical documentation behind "retention" studies when they are held up for public consumption is the cohort definition -- who is being measured, and for how long? In the analyses depicted in Figure 1, all studies only share one similarity: They are all based on freshmen entering in the fall term. However, it is inaccurate to say they are fully comparable on this point. The HERI, AASCU and NCES-BPS studies are based on *all* first-time freshmen, while the ACT and NCAA data are only on first-time *full-time* freshmen (in the fall term). The 1996 Commission analysis lands in between these, measuring only first-time freshmen attempting twelve or more credits in the first year. In addition to differing definitions at the outset of the analysis, the measurement periods are different. In the Commission, HERI, AASCU and NCAA analyses, students' completion rates are reported after six years, while the ACT and NCES-BPS studies report completion after five years.

Figure 3 indicates as "most comparable" degree completion rate from the Commission's 1996 study compared with each of the other studies. In order to compare Commission data with that of the HERI, AASCU, and NCES-BPS studies, the 12-credit filter must be removed, replacing students who had been otherwise excluded. Generally, the Indiana numbers represented from Commission analysis are higher than the national numbers by a margin of 4% to 8%. Due to the statewide nature of the Commission database, students have been tracked historically for enrollment and completion to ANY public Indiana campus. It is estimated that a difference of approximately 3.5% is attributable to those students who completed their degree at a campus other than where they began as freshmen (877 out of 24,950 entering baccalaureate freshmen in the Commission's 1996 study). In the case of the Beginning Postsecondary Students (NCES-BPS) study, their numbers can be considered inflated compared to the Commission's analysis because students are tracked for completion of their degrees to anywhere in the nation, not just the originating state and sector (public or private). While 48% of the NCES-BPS students are referenced as completers in Figure 3, 39% completed their degree at the first institution in which they enrolled. Adjusting Commission data for completers at the first-enrolled campus (baccalaureate, all students, without the 12-credit filter would indicate a statewide degree completion rate of approximately 37%.

Figure 3:
Comparative Baccalaureate Degree Completion Rates Reported by the Commission and National Studies -- Attempt to Provide "Most Comparable" Figures

	National Studies		1996 Commission Study	
Basic definition of students tracked for degree completion	**Study listed**	**Completion rate**	**Most comparable completion rate**	**Necessary adjustment to display comparable data**
First-time, full-time freshman baccalaureate students completing a baccalaureate degree within six years	NCAA CSRDE	53% 55%	59%	no adjustment, use full-time sub-cohort
All first-time baccalaureate freshmen completing a baccalaureate degree within six years	HERI AASCU	39% 41%	47%	replace students excluded by the 12-credit filter
First-time, full-time freshman baccalaureate students completing a baccalaureate degree within five years	ACT	46%	51%	no adjustment, use full-time sub-cohort after 5 years
First-time freshman baccalaureate students completing a degree within five years at any institution	NCES-BPS	48%*	40%*	replace students excluded by the 12-credit filter and use full-time sub-cohort after 5 yrs

* Commission and NCES-BPS studies track completion outside of the first-enrolled campus. The Commission tracks students to any Indiana public campus, while the NCES-BPS study accounts for student degree completion *anywhere*. (For a more detailed description of this effect, refer to the explanatory paragraph on the preceding page.

The Student-Right-To-Know Act

The Student Right-to-Know and Campus Security Act (Public Law 101-542) requires higher education institutions to disclose information about completion and graduation rates and campus safety policies and procedures to current and prospective students and employees. Within the context of Student Right-to-Know (SRK), this information is defined as "consumer information." Several of the referenced studies (NCAA, IPEDS, CSRDE) refer to SRK as guiding principles.

Among the many groups to scrutinize SRK are the American Association of Collegiate Registrars and Admissions Officers (AACRAO) and the Joint Commission on Accountability Reporting (JCAR). JCAR was established by several national organizations to recommend consistent reporting conventions for public higher education on topics including educational goals, student charges, graduation rates, and transfer rates. AACRAO took an in-depth look at implementation issues of SRK.

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Current Practices and Suggested Changes

Despite efforts by the Commission staff to maintain consistency in reporting throughout the four analyses presented so far, changes in data and attempts to improve the utility of the analyses have made comparability difficult. For example, in the 1996 analysis, the definition of the cohort of students being studied was altered in three substantial ways.

First, only those students who had attempted 12 or more credits in their first year of enrollment were considered. This first alteration was employed to "define out" the occasional, or courses-only, students, despite the fact that they had been designated as "degree-declared." This 12-credit "filter" has a substantial effect on the reporting of part-time students. Overall, if these students had not been filtered out of the 1996 analysis, the statewide average six-year degree completion rate for baccalaureate degree seeking students would have been 47%, rather than the reported 51%.

Second, the cohort of students was more cleanly defined to include students who began their studies in the fall term, rather than including all first-time freshmen for the year (even those beginning in the spring or summer). This latter issue can be automatically accommodated in the subsequent analyses due to data definition enhancements which begin with the 1990-91 Student Information System (SIS) data. Both of these redefinition factors resulted in higher rates of completion being reported than in previous analyses. Although there may have been some increase in completion rates due to institutional performance, most of the gains reported in the 1996 analysis can be traced to methodological changes.

The third methodological change implemented with the 1996 analyses applies only to the associate degree seeking students. Applying a measurement period of 150% of the normal time for full-time completion, completion rates for associate degree seeking students were only reported after three years, rather than six. In the 1996 analysis, the three-year degree completion rate for associate degree seekers (beginning study in the fall of 1992) was reported as 23%. Using a six-year degree completion rate (for students beginning in the fall of 1989), the reported figure would have been 34%.

Appendices to this Document

Appendix A provides the context for definitions and measurement practices used in the Commission's reports on degree completion and persistence, including other practices and any suggested changes. While many of the changes are issues of how the data are displayed, these, along with some substantive changes to the accounting of student movement -- between campuses and between degree levels -- will aid in improving the comparability of Commission analyses with national reports. Appendix B provides a summary of the suggested changes.

Appendix C is a selected bibliography of Commission reports, national studies referenced for this working paper, and relevant articles from *Postsecondary Education Opportunity*, published by Thomas G. Mortenson.

TABLE 1: Degree Completion and Persistence - 1989-90 Baccalaureate Freshmen

Cohort Description: Freshmen (with 12+ credits in year 1)
Cohort Year: 89-90
Tracked Through: 94-95
Degree Objective: Baccalaureate
Institution: All Institutions

Group	Number	90-91 Comp-leters	90-91 Per-sisters	91-92 Comp-leters	91-92 Per-sisters	92-93 Comp-leters	92-93 Per-sisters	93-94 Comp-leters	93-94 Per-sisters	94-95 Comp-leters	94-95 Per-sisters	Avg Cr Hrs	Avg GPA	Avg Year Load	Avg Years Attnd	Not Again Enrolled
Total:	24,950	--	85%	1%	77%	21%	51%	43%	25%	51%	14%	107	2.74	25.30	4.11	10%
Program Type:																
Non-occupationally Specific	22,398	--	85%	1%	77%	21%	52%	43%	25%	51%	14%	107	2.74	25.31	4.12	10%
Occupationally Specific	2,552	--	86%	1%	76%	22%	49%	43%	22%	49%	13%	104	2.76	25.24	4.00	10%
Ethnicity:																
Black	1,492	--	76%	--	64%	6%	52%	17%	34%	25%	22%	92	2.27	23.37	3.77	16%
American Native	67	--	66%	--	61%	10%	46%	24%	28%	39%	6%	89	2.53	24.55	3.52	25%
Asian	439	--	90%	2%	83%	30%	52%	54%	22%	62%	12%	122	2.75	27.39	4.37	8%
Hispanic	443	--	79%	1%	70%	12%	54%	28%	34%	37%	20%	98	2.59	23.82	4.00	14%
White	22,269	--	86%	1%	78%	22%	52%	45%	24%	52%	13%	108	2.78	25.39	4.14	10%
Non-resident Alien	240	2%	78%	11%	60%	37%	29%	51%	11%	56%	4%	104	2.89	28.48	3.58	19%
Unknown	0	--	--	--	--	--	--	--	--	--	--	0	0.00	0.00	0.00	--
Residency Status:																
Resident	20,072	--	85%	1%	76%	17%	55%	38%	28%	46%	16%	106	2.70	24.64	4.16	10%
Non-resident	4,878	--	86%	1%	77%	39%	36%	64%	10%	69%	4%	110	2.94	28.03	3.90	13%
Age at Entry:																
Under 19	22,496	--	87%	1%	78%	22%	52%	46%	24%	54%	13%	110	2.74	25.86	4.17	9%
19-21	1,222	--	73%	4%	56%	11%	43%	19%	30%	25%	19%	77	2.56	20.91	3.52	18%
22-25	427	1%	70%	2%	56%	6%	44%	13%	28%	17%	21%	69	2.76	19.92	3.39	22%
26-35	565	--	80%	2%	63%	5%	52%	14%	35%	19%	19%	74	3.02	19.15	3.73	16%
Over 35	199	--	78%	2%	66%	8%	47%	17%	31%	20%	17%	71	2.97	18.56	3.66	18%
Unknown	41	--	90%	--	76%	7%	78%	37%	41%	71%	7%	115	2.73	23.54	4.68	2%
Gender:																
Female	13,560	--	85%	1%	76%	24%	48%	44%	23%	51%	13%	104	2.81	25.21	4.05	10%
Male	11,390	--	85%	1%	77%	18%	55%	42%	27%	50%	15%	109	2.67	25.41	4.18	10%
Unknown	0	--	--	--	--	--	--	--	--	--	--	0	0.00	0.00	0.00	--
Attendance at Entry:																
Full-time	20,821	--	91%	1%	82%	25%	54%	51%	23%	59%	12%	117	2.78	27.04	4.31	7%
Part-time	4,129	--	59%	--	48%	1%	40%	5%	31%	9%	22%	56	2.53	16.53	3.11	29%

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TABLE 2: Degree Completion and Persistence - 1992-93 Associate Freshmen

Cohort Description: Freshmen (with 12+ credits in year 1)
Cohort Year: 92-93
Tracked Through: 94-95
Degree Objective: Associate
Institution: All Institutions

Group	Number	93-94 Comp-leters	93-94 Per-sisters	94-95 Comp-leters	94-95 Per-sisters	95-96 Comp-leters	95-96 Per-sisters	96-97 Comp-leters	96-97 Per-sisters	97-98 Comp-leters	97-98 Per-sisters	Avg Cr Hrs	Avg GPA	Avg Year Load	Avg Years Attnd	Not Again Enrolled
Total:	6,437	13%	56%	23%	31%	23%	--	23%	--	23%	--	48	2.47	22.38	2.12	28%
Program Type:																
Non-occupationally Specific	3,831	11%	58%	19%	34%	19%	--	19%	--	19%	--	47	2.50	21.70	2.12	29%
Occupationally Specific	2,606	17%	54%	28%	27%	28%	--	28%	--	28%	--	51	2.43	23.38	2.13	27%
Ethnicity:																
Black	511	4%	53%	9%	27%	9%	--	9%	--	9%	--	39	2.06	20.22	1.89	40%
American Native	28	--	68%	11%	39%	11%	--	11%	--	11%	--	47	2.21	20.70	2.18	25%
Asian	57	9%	65%	33%	26%	33%	--	33%	--	33%	--	61	2.83	26.32	2.25	21%
Hispanic	97	10%	58%	20%	33%	20%	--	20%	--	20%	--	45	2.36	20.98	2.11	30%
White	5,732	14%	56%	24%	31%	24%	--	24%	--	24%	--	49	2.50	22.55	2.14	27%
Non-resident Alien	12	25%	67%	50%	42%	50%	--	50%	--	50%	--	79	3.04	28.86	2.75	8%
Unknown	0	--	--	--	--	--	--	--	--	--	--	0	0.00	0.00	0.00	--
Residency Status:																
Resident	6,146	13%	56%	22%	31%	22%	--	22%	--	22%	--	48	2.46	22.18	2.12	28%
Non-resident	291	21%	50%	36%	23%	36%	--	36%	--	36%	--	60	2.71	26.59	2.17	27%
Age at Entry:																
Under 19	4,798	13%	57%	23%	31%	23%	--	23%	--	23%	--	52	2.36	23.62	2.15	28%
19-21	412	12%	54%	23%	25%	23%	--	23%	--	23%	--	40	2.65	19.66	2.01	31%
22-25	363	13%	50%	18%	31%	18%	--	18%	--	18%	--	37	2.74	19.04	1.96	34%
26-35	643	16%	55%	25%	30%	25%	--	25%	--	25%	--	38	2.90	18.26	2.06	28%
Over 35	215	9%	57%	18%	34%	18%	--	18%	--	18%	--	38	2.92	18.04	2.10	32%
Unknown	6	--	100%	17%	67%	17%	--	17%	--	17%	--	44	2.44	15.04	2.83	--
Gender:																
Female	3,025	13%	58%	22%	32%	22%	--	22%	--	22%	--	46	2.57	21.38	2.13	27%
Male	3,411	14%	55%	23%	30%	23%	--	23%	--	23%	--	50	2.38	23.28	2.11	29%
Unknown	1	--	--	--	--	--	--	--	--	--	--	12	0.00	12.00	1.00	100%
Attendance at Entry:																
Full-time	4,166	17%	61%	29%	32%	29%	--	29%	--	29%	--	59	2.40	26.41	2.26	20%
Part-time	2,271	5%	48%	10%	29%	10%	--	10%	--	10%	--	29	2.63	14.99	1.86	44%

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			credits							

APPENDIX A:

Current Definitions and Measurement Practices in Degree Completion and Persistence Reporting from the Commission's Student Information System

Cohort

Current Practice: Only those students whose apparent objective is a degree and who are freshmen are included in the cohort. Those who are reported as "unclassified" in the base year are excluded. While it is impossible to capture accurately the intentions and educational objectives of each student (which may change over time, in any case), every effort is made to try to measure the degree completion rates of only those students seeking degrees. One mechanism for assuming that the analysis includes only "serious" degree-seeking students is to control for only those students who enrolled for a minimum of 12 credit hours during the base year. In the 1996 analysis, all students attempting less than 12 credits in the first year (1989-90 for baccalaureate and baccalaureate transfer students; 1992-93 for associate students) were excluded from all counts and calculations.

"First-time freshmen" are defined differently in the 1992-93 cohort than the 1989-90 cohort. Prior to 1990-91 SIS reporting, assumptions of first-time-ness must be based on the entry status and level of the student, with no available controls for which term the student began studies. Beginning with the 1990-91 SIS data, a "cohort identifier" field was added. Using the cohort identifier, each institution codes the appropriate students as first-time freshmen in the fall term of the reporting year. For the 1989-90 base year, the cohort of students is defined as freshmen, identified as first-time students in 1989-90. For the 1992-93 base year, the cohort of students is defined as freshmen, identified as first-time freshmen by the institution via the cohort identifier field. Those institutions able to comply provided 1989-90 cohort identifiers for their fall freshman class as a proxy for the field which exists in subsequent years (IU, ISU, USI, BSU, VU, and Ivy Tech).

Other Examples: Identifying fall term, first-time degree seeking students is the standard method, as identified within the Federal Student Right-to-Know (SRK) regulations, as well as the Joint Commission on Accountability Reporting, the National Center for Education Statistics (NCES) and other studies reported nationally. The confusion related to comparability arises when it is not clearly stated whether the students being reported include the entire cohort of students or just those who begin their studies full-time.

Suggested Change: None.

APPENDIX A:

Current Definitions and Measurement Practices in Degree Completion and Persistence Reporting from the Commission's Student Information System

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Campus

Current Practice: Students are categorized by institution based solely on their place(s) of attendance in the beginning year of the analysis. Campus assignment for those students who enroll simultaneously in more than one institution in the first year are assigned based on the predominant institution over the first three years. If there is no obviously dominant institution, the student is assigned to one of the multi-campus or multi-institution designations. Multi-campus enrollments include students enrolled at more than one campus within a single institution. Multi-institution enrollments include students whose enrollment spans more than one institution. (For example, a student enrolled in the first year at both Purdue Calumet and Purdue North Central would be classified as Purdue University, Multi-campus. A student enrolled in the first year at both IU Bloomington and Ivy Tech Columbus would be classified as Multi-Institutional.) Students are tracked throughout Indiana public higher education and are considered completers or persisters even though they may have transferred to one or more other public institution in the following years. Completers are those individuals who achieved their degree objectives while persisters have not, but are still in attendance.

Other Examples: While other state agencies (Colorado, Georgia, and Texas were examined) report degree completion rates using a statewide data system which will include inter-institution transfers within the state, data presented most often in the media come from institutional reports which are unable to accommodate transfer activity in the same way.

SRK, JCAR and NCES reporting requirements and recommendations include the accommodation of student transfer activity. Under these guidelines, institutional reports on degree completion and persistence are to include students who re-enroll or complete at their institution as well as those from the original cohort who are known to be enrolled elsewhere.

APPENDIX A:

Current Definitions and Measurement Practices in Degree Completion and Persistence Reporting from the Commission's Student Information System

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Suggested Change: The issue of inter-campus and inter-institutional transfer is a unique capability of the statewide data system that *should* be exploited. However, more precise attention should be devoted to the issue of transfer activity. The suggestion is that students, while still assigned to a primary institution, should be reported in greater detail as to whether their continued attendance and degree completion is at the original campus or elsewhere in Indiana postsecondary education.

Attendance Status

Current Practice: Students are categorized as full- or part-time based on the student's level of enrollment during the first year of the analysis. Full-time students are those students attempting 24 or more credit hours in the first year. Part-time students are those students attempting less than 24 credit hours in the first year. Due to SIS data enhancements beginning with the 1990-91 reporting year, it is assumed that subsequent reports will base full-time or part-time status on the fall semester enrollment level. In the 1996 analysis, students attempting less than 12 credits in the first year of the analyses were "defined out" of consideration.

Other Examples: There is no comparable method in which students are "defined out" of a cohort based on a minimum number of credits enrolled. All of the studies and reports viewed in the context of this working paper categorize cohort students as either full-time or part-time based on their attendance status in the initial term of enrollment. Any exclusionary factors stem from whether or not the student is listed by the institution as degree-seeking.

Suggested Change: If it is desirable to retain the twelve credit filter used in the Commission's 1996 analysis, completion rates by attendance status should be expanded to include full-time, part-time seeking 12 or more credits in the first year, and part-time seeking less than 12 credits in the first year.

APPENDIX A:

Current Definitions and Measurement Practices in Degree Completion and Persistence Reporting from the Commission's Student Information System

-- continued --

Degree Objective

Current Practice: Students are classified as seeking an associate degree or a baccalaureate degree based on their initially reported enrollment in the first year of the analysis. Baccalaureate transfer students have been reported since the 1991 update on 1984-85 freshmen. These students begin their studies classified as associate freshmen, but are classified as baccalaureate students by the institutions in successive years, either at the campus of entry or another campus. This category applies only to students who move on to baccalaureate-level studies before they complete an associate degree.

Other Examples: While the assignment of the student's degree objective at initial enrollment is customary, there is little treatment given to the issue of student "level transfer," with the exception of associate degree-seeking students continuing into baccalaureate studies. Typically, this measure is viewed in the context of institutional transfer (two-year to four-year campus movement).

Suggested Change: The issue of student "level transfer" should be examined and reported more fully, including "backward" transfer.

Measurement Period

Current Practice: Initially, the Commission reported all degree completion rates out to six years, regardless of the degree objective of the student. This is in contrast with "normal" methodologies, such as those expected in Student-Right-To-Know and NCAA reporting. While six years is a normal tracking period for degree completion studies, this typically applies only to baccalaureate degree seekers. Guidelines set forth in Student-Right-To-Know use what is called the *150% Rule* (that is, 150% of the amount of time it normally should take a student to complete a degree while enrolled full-time). In the case of baccalaureate degree seekers, 150% is six years. In the case of associate degree seekers, however, 150% is only three years.

APPENDIX A:

Current Definitions and Measurement Practices in Degree Completion and Persistence Reporting from the Commission's Student Information System

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Other Examples: While the most commonly applied time period for measurement is the 150% rule, various studies use other time periods (typically in addition to the 150% time period). For example, the HERI study cited in Figure 1 reports degree completion rates after 4-, 6-, and 9-year periods, and the ACT study reports completion rates after 5 years. The SRK regulations have become the guiding principle on this issue and support the 150% rule applied at all undergraduate degree objectives.

Suggested Change: The 150% rule be should adhered to with baccalaureate students reported out to 6 years, and associate degree students be reported out to 3 years. Beginning with the 1990 freshman cohort, degree completion should be tracked to nine years (when available).

Persistence

Current Practice: The Commission's definition of persistence has always been an indicator of whether a student enrolled *at all* during a given year. However, many institutional studies track persistence across fall enrollment terms. The different practices likely have little impact on full-time students, but could be significant for part-time students.

Other Examples: The NCES Graduation Rate Survey, administered within the context of the Integrated Postsecondary Education Data System (IPEDS), defines a persisting student as one from a given cohort who is still enrolled as of the status date. This is consistent with the SRK regulations, wherein the guiding principle is a consistently applied definition of the measurement period based on the 150% rule. With regard to the reporting of second-year persistence, the only studies referenced in this paper which do so are the Commission's analysis and the NCES Beginning Postsecondary Students (BPS) study. In both of these cases persistence is measured annually; however, most institutional studies report second year persistence as a fall-to-fall re-enrollment percentage.

APPENDIX A:

Current Definitions and Measurement Practices in Degree Completion and Persistence Reporting from the Commission's Student Information System

-- continued --

Suggested Change: If the goal of reporting degree completion and persistence is to include an accurate picture of behavior at the end of a time period, the analysis must include each full year of enrollment activity. Persistence should continue to be reported based on the student's enrollment during the year with an incorporation of transfer status (previously mentioned). For the next Commission analysis, however, persistence should be measured in terms of year-to-year as well as fall-to-fall enrollment, with an assessment of differences and strengths.

Completion

Current Practice: Did the student receive a degree? While this should be a straight forward measure, how the student is reported, and for receiving what degree can vary. Some studies simply define a cohort of freshmen, irrespective of their degree objective. The Commission analysis has always viewed students as completers in one of three ways: an associate degree-seeking student completing an associate degree, a baccalaureate degree-seeking student completing a baccalaureate degree, or, an initially associate degree-seeking student completing a baccalaureate degree.

Other Examples: The IPEDS Graduation Rates Survey instructs institutions to categorize each class of degree-declared undergraduates based on their initial degree intentions, but the ultimate degree completion is reported across all levels of undergraduate degrees. For example, students who begin as baccalaureate-seeking freshmen but complete an associate degree instead are reported are reported to reflect this "degree-level transfer."

Suggested Change: Consistent with earlier statements on degree level classification, a student's degree objective and ultimate degree completion should be reported to accommodate "degree-level transfer," indicating completion of a degree other than the student's initial degree objective (as identified in the student's SIS record).

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APPENDIX A:

Current Definitions and Measurement Practices in Degree Completion and Persistence Reporting from the Commission's Student Information System

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Attrition

Current Practice: In the current Commission methodology, attrition (or dropout) is measured in two ways. First, in any given year, attrition is whatever remains from the original cohort once all completers and persisters are identified. Second, because students can drop in and out throughout the period of analysis, *dropouts* are measured by calculating what portion of the original cohort did not enroll again for the duration of the analysis after the first year.

Other Examples: The literature consistently indicates that the issue of drop-out is impossible to measure because a departing student may re-enter postsecondary education any number of years later. In the reporting structures viewed for this working paper, students are reported as completing, still enrolled, or transferred-out. Any students from the initial cohort not captured in one of these three categories is assumed lost (or stopped-out, or dropped-out) for that period of analysis.

Suggested Change: Retain the current measure for dropout -- define drop-out students as those students not returning for the duration of the analysis after the first year.

Transfer

Current Practice: The current reporting on transfer activity within the context of the Commission's degree completion and persistence study is minimal. Basically, how many students began their studies at one institution and finished at another? While institutional methodologies are unable to report anything other than a student's activity at a specific institution, the uniqueness of the SIS allows transfer activity within the state to be included so as to report campus-specific as well as statewide degree completion and persistence.

Other Examples: In general, all guidelines specify some treatment of transfer activity aimed at transfer to another institution. In addition, examples of other state agency reports show transfer activity by institution type (two-year, four-year).

Suggested Change: Transfer activity should be incorporated in a manner consistent with SRK and IPEDS definitions, including student movement to different degree levels as well as institutions.

APPENDIX B:

Summary Of Suggested Changes to the Commission's Degree Completion and Persistence Analysis Stemming from National Context

Concept	*Suggested Change*
Cohort:	Students should be classified within the cohort who are identified as degree-seeking freshmen in the fall term of the analysis start date, including summer admissions and students who enter with advanced standing.
Campus:	Students, while still assigned to a primary institution, should be reported in greater detail as to whether their continued attendance and degree completion is at the original campus or elsewhere in Indiana postsecondary education.
Attendance Status:	Completion rates by attendance status should be expanded to include full-time, part-time seeking 12 or more credits in the first year, and part-time seeking less than 12 credits in the first year.
Degree Objective:	The issue of student "degree-level transfer" should be examined more fully, including "backward" transfer, before establishing a policy.
Measurement Period:	The 150% rule be should be followed with baccalaureate students reported to 6 years, and associate degree students be reported to 3 years. Beginning with the 1990 freshman cohort, degree completion should be tracked to nine years.
Persistence:	For the next analysis, compute persistence in terms of year-to-year as well as fall-to-fall, assessing the merits of each approach.
Completion:	Consistent with earlier statements on degree level classification, a student's degree objective and ultimate degree completion should be reported to accommodate the attainment of a different degree type than the student's original classification (e.g. a baccalaureate-seeking student who receives an associate degree instead).
Attrition:	Retain the current definition for dropout (that is, students not returning for the duration of the analysis after the first year).

Transfer:	Incorporate transfer activity in a manner consistent with SRK and IPEDS definitions, including student movement to different degree levels as well as institutions.

APPENDIX C:

Selected Bibliography on Degree Completion Reporting

Indiana Commission for Higher Education Studies (by agenda issue date)

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APPENDIX C:

Selected Bibliography on Degree Completion Reporting

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